DENTAL HEALTH IN THE

PO LEUNG KUK CHILDREN'S HOME

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No. 45

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CONTENT

1. ABSTRACT

Po Leung Kuk is a charitable organization in Hong Kong with a long history and offers various social services. The present project concerns with the children, aged 6-12 years, living in Po Leung Kuk. The primary aim of this project is to promote the dental health, and dental health related knowledge and behaviour of the children. The dental health education programme was conducted in three visits through a variety of activities that were thought to be very attractive and effective in conveying dental health knowledge to children. Baseline data were collected by means of a questionnaire interview and a clinical examination before the implementation of the education programme. A similar survey was held 10 weeks after the completion of the programme to study whether there were changes in the children's dental health knowledge and behaviours.

A total of 74 and 77 children were surveyed at the baseline and at the evaluation respectively. The dmft index of the 6-8 year-olds was 2.8, and that of the 9-11 year-olds was 2.7. The DMFT index of the 6-8 and 9-11 year-olds was 0.2 and 0.4 respectively. At the baseline, the children was found to have a rather good toothbrushing and diet behaviour, and they also possessed some basic knowledge about dental caries. Findings of the evaluation survey showed that there was a significant improvement in sites with a very poor initial oral hygiene, i.e. a plaque score of 3. However, no significant improvement was found in the periodontal health status as determined by the percentage of sites that bled after gentle probing. There were also no appreciable changes in the dental health knowledge and behaviour of the children after the dental health education programme.

The social workers who take care of the children, called house-parents in Po Leung Kuk, are very important in the success of the dental health education programme. However, there was a general lack of participation of the house-parents in this project. It is recommended that in later similar projects, every effort should be put to motivate the key persons and involve them in the education programme.

The idea of delivering dental health messages to the children in form of games is worth attempting but it is not appropriate in Po Leung Kuk. This may be due to the children regarding the programme as just a fun day and not paying any attention to the learning of new knowledge.

2. INTRODUCTION

2.1. BACKGROUND OF PO LEUNG KUK

Po Leung Kuk was founded in the late 19th century when Hong Kong suffered from a very serious abduction problem. It provides various services such as residential care and day care for children and elderly, rehabilitation, and education service. Our main concern is the oral health of the children under residential care (1). All children admitted to Po Leung Kuk are referred by the Social Welfare Department. They are mostly from families with problems such as imprisoned parents, hospitalised parents, or broken families. Some are victims of child abuse, illegitimate children, or orphans.

Children in the residential home are provided with basic daily needs and proper education - from kindergarten through primary to secondary school. There are a kindergarten and a primary school within Po Leung Kuk and all children aged 4 to 12 years attend these two schools. The children are divided into groups of about 10 and live in ten houses. Social workers called house-parents are responsible for taking care of the children. Other than enjoying the services provided by the Po Leung Kuk, the children there also occasionally participate in recreational and outdoor activities organized by other voluntary social service organizations.

There is a dental clinic in the Po Leung Kuk. At present nine voluntary dentists from the Hong Kong Dental Association and eight chairside assistants serve the children on a rotatory basis. Every newly admitted child would receive a dental check-up and the necessary treatments. The dental treatments provided include restorations, extractions and pulp treatment. However, preventive care is seldom provided.

2.2. PAST DENTAL HEALTH PROJECT IN CHILDREN'S HOME

Only one dental health project was conducted in a children's home in Hong Kong, and it was carried out by a group of dental students in St. Christopher's Home in 1984 (2). 127 children age 7-12 were interviewed and examined for oral hygiene status and caries experience. A dental health education programme was implemented. The results showed that the dental caries experience of the children there was low and comparable to the findings from other Hong Kong dental health surveys. Virtually no change in oral hygiene status was recorded after the dental health education programme.

2.3. PROJECT SELECTION

Oral health behaviour is influenced by many social and educational variables. One of the most important variables is socialization, the process whereby knowledge, values, attitudes and routines are transmitted to individuals through social interactions (3). Young children do not learn new behaviour through passive absorption but through activities and experiences (4). In Po Leung Kuk, the children are influenced by their peers and house-parents. Therefore, we plan to put more emphasis on the active participation of the house-parents throughout the programme in order to achieve a continuous reinforcement of the dental health education.

We chose the children in Po Leung Kuk as our target group for the following reasons:

1. They are under-privileged and do not receive as much care from their parents as other children in normal families.

2. They live in an institute and attend a primary school within Po Leung Kuk. So their daily activities, behaviour and diet is under control.

3. Implementation of the programme is relatively easy as they can be easily gathered.

4. There is a voluntary dental clinic run by HKDA in Po Leung Kuk. Our project can provide information concerning the dental health status and treatment need of the children to the dentists serving the children there.

3. AIMS AND OBJECTIVES

The aim of our project is to promote the dental health, and dental health related knowledge and behaviour of the children in Po Leung Kuk. In order to achieve our aim, the following objectives are set:

1. To investigate the dental health status, and dental health related knowledge and behaviour of the children in Po Leung Kuk.

2. To implement a dental health education programme for the children in form of games and oral hygiene instruction.

3. To implement a dental health education programme for the social workers in Po Leung Kuk.

4. To investigate the effectiveness of the dental health education programme given to the children.

4. MATERIALS AND METHODS

4.1. PROGRAMME OUTLINE:

Visit	Date	Duration	Content
1	18.3.89	1 day	1) Tea gathering with the children. 2) Questionnaire survey to investigate the dental health related knowledge and behaviour of the children. 3) A clinical examination to investigate the dental health status of the children.
2	15.4.89	1 afternoon	1) Games for the children to deliver the dental health messages. 2) Oral hygiene instruction for the children. 3) Dental health education for the social workers.
3	29.4.89	1 afternoon	1) Colouring-in competition. 2) Quiz on dental health.
4	8.7.89	1 morning	1) Questionnaire survey and clinical examination of the children to evaluate the effectiveness of the dental health education programme.

4.1.1. Visit 1: Baseline data collection and dietary advice

Information on personal background, dental health knowledge, behaviour and oral health condition were collected by means of a questionnaire interview and a clinical examination. The data collected served as a guideline for designing the dental health education programme in the second stage of the project and also as the baseline for evaluation.

Dietary advice was given in the same visit by means of tea gathering and games. The children were arranged to come in small groups in 4 separate sessions in order to facilitate the smooth running of the programme.

4.1.2. Visit 2: Games day

In the second visit, dental heath education in form of games, video show, demonstration, and small group discussion was delivered to the children. The programme aimed at providing information on dental care with emphasis on the prevention of dental caries and periodontal disease. Areas of deficiency, misconception and confusions revealed in the baseline survey findings were clarified. The message was delivered to the house-parents at the same time so that they could reinforce the education in their day-to-day activities.

4.1.3. Visit 3: Quiz and colouring-in competition

The children were divided into several groups and a quiz competition was carried out. All of the questions asked were related to dental health messages. A colouring-in competition was carried out at the same time so as to arouse the interest of the children.

4.1.4. Visit 4: Evaluation survey

The dental health knowledge, behaviours, and oral hygiene status of the children were re-assessed by means of a questionnaire interview and a clinical examination. The information collected was used to assess the efficacy and adequacy of the dental health education programme.

4.2. QUESTIONNAIRE INTERVIEW

The interview was carried out in the library of Po Leung Kuk prior to the clinical examination during the baseline survey. Two of our group members acted as interviewers and a structured questionnaire was used (appendix 1). The questions were asked in Cantonese, and the children answered in their own words. Then the interviewers recorded down the answers on the questionnaires.

The questionnaire included two sections. Section one served to collect personal information of the children. Questions in section two tried to elicit the oral health related knowledge and practices of the children. Questions on the causes and prevention of dental caries and periodontal diseases were also asked.

4.3. CLINICAL EXAMINATION

The clinical examination was carried out by 2 examiners using portable dental chairs, intra-oral fibre-optic light source, disposable mirrors, sickle probes and WHO621 periodontal probes. Teeth were not dried during the examination. Owing to limited resources, radiographs were not taken.

The oral hygiene status of the children was assessed using the Gingival Index and the Plaque Index developed by Loe and Silness and Silness and Loe (5) respectively. Buccal surfaces of tooth 16, 12, 24 and lingual surfaces of tooth 36, 32, 44 were examined. If the index teeth were missing, the reading would be omitted.

The DMFT Index and the caries diagnostic criteria recommended by the World Health Organization (6) was used to register the dental caries status of the children. Surfaces of all teeth were examined by visual inspection and caries diagnosis was confirmed by the use of a sickle probe. The findings were recorded on a specially designed form (appendix 2).

Calibration exercises were conducted on the first 2 children of each examiner in the baseline examination. The diagnosis of the 2 examiners were compared to monitor inter-examiner variations. Any discrepancies were settled by discussion with our project supervisor. Random duplicate examinations of the children were carried out throughout the examination.

4.4. DENTAL HEALTH EDUCATION

Dental health education for the children was conducted in the first three visits through various means which included dietary advice, games, video show, demonstration on toothbrushing, quiz, and colouring-in competition. The objectives and procedures of these activities will be further elaborated on in the following sections.

4.4.1. DIETARY ADVICE IN THE TEA GATHERING

Objectives

1. To convey messages concerning cariogenic and non-cariogenic food, and the method in which cariogenic food can be taken with less harm.
2. To let the children have a real touch and taste of the food.
3. To build up a friendly relationship with the children.

Procedure

The participating children were divided into 4 small groups. Each group came at a different time and was accompanied by their house-parents. A brief introduction of different cariogenic and non-cariogenic foods using real samples was given to the children before the tea-gathering. A list of the food samples used in the dietary advice is given in appendix 3.

4.4.2. GAMES DAY

Objectives

1. To reinforce the message delivered in the last visit on diet.
2. To convey fundamental messages on dental health care.
3. To introduce briefly the causes and prevention of common dental diseases.

Procedure

The games programme was held in the main hall of Po Leung Kuk. There were 4 stations each situated at one corner of the hall. Each participant child was given a ticket and they played at each station. When a child had finished playing at a station, our group member who was in charge of the station would put a stamp on his/her ticket. Souvenirs were given to the children if they had played at all four stations.

Station I : Exhibition

Exhibition boards containing dental health messages were set up in the first station. The demonstrators at the station, consisted of members of our group and dental surgery assistants, delivered information concerning the causes and prevention of dental caries and periodontal diseases to the children. Before the children left the station, there was a quiz concerning the messages given and each child had to answer the questions on a answer sheet which was marked later.

Station II : Fishing

There was a fishing rod with a hook, and some paper and plastic models of cariogenic and non-cariogenic food samples lying on the floor. The demonstrators at the station asked the children to pick up the non-cariogenic food samples using the fishing rod.

Station III : Darting

There was a dart-board with pictures. Each child was given 3 darts and he/she had to throw the darts to the pictures which showed items that were good for teeth.

Station IV : Treasure hunt

There was a dark box which contained some cariogenic food samples, e.g. Coca-cola, sweet biscuits, and also some non-cariogenic food samples, e.g. fruits. The children had to put their hands inside the box, and picked up the non-cariogenic food samples blindly.

4.4.3. QUIZ COMPETITION

Objectives

1. To refresh the children's memory concerning the basic dental health knowledge conveyed in the previous visits.
2. To reinforce the importance of dental health through another interesting game.

Procedure

The children attended the competition on a group basis. This competition was divided into two parts. In the first part, each group has to answer a set of questions in turn, while in the second part the groups had to compete for the right to answer the questions. In order to make the second part more interesting, each child was given a paper cup, and a ping-pong ball was to be passed through the whole group one by one using the paper cup. The group which finished first would have the right to answer the question first. The questions asked in the quiz is shown in appendix 4.

4.4.4. VIDEO SHOW AND ORAL HYGIENE INSTRUCTION

Objectives

1. To convey the concept of preventing dental diseases to the children.
2. To teach the children a correct tooth cleaning technique.

Procedure

A cartoon video on dental health produced by the Hong Kong Dental Association and Johnson & Johnson Co. Ltd. was shown in a hall. This was followed by group discussions and demonstrations on toothbrushing using teaching models.

The following messages were delivered in the video show and group discussions:
1. What is plaque?
2. The common dental diseases - dental caries and periodontal disease.
3. Causes and prevention of dental caries and periodontal disease.
4. Preventive measures - toothbrushing, selection of toothbrush, flossing, use of fluoride.

A toothbrush and a dental health education pamphlet which contained the outline of the messages delivered in the video (appendix 5) were given to each child to reinforce the messages.

4.4.5. COLOURING-IN COMPETITION

Objectives

1. To allow the children to be familiar with the variety of dental cleansing aids.
2. To consolidate some important dental health messages.

Procedure

Each child was given a picture in which an outline of some dental cleansing aids and a set of questions were given. They were asked to colour the picture and answer the questions. The coloured picture and answers were marked and winners were chosen from each house.

4.5. EVALUATION SURVEY

The evaluation survey was similar to the baseline survey and took place 10 weeks after implementing all the dental health education programmes. A questionnaire interview and a clinical examination were carried out in the library of Po Leung Kuk. The questionnaire used was the same as that used in the baseline survey. The clinical examinations were carried out by two same examiners as in the baseline survey using the same diagnostic criteria and examination procedures.

The oral hygiene and periodontal status of the children were assessed and recorded. The dental caries status of the children who had been examined in the baseline survey was not recorded this time because an appreciable change was not anticipated within such a short time span.

5. RESULTS

Table 1. Age and sex distribution of the children at the baseline survey

Age	Male	Female	Total
6-8	21	17	38
9-11	10	21	31
12-14	0	5	5
	31	43	74

Table 2. Age and sex distribution of the children at the evaluation survey

Age	Male	Female	Total
5	1	0	1
6-8	27	17	44
9-11	6	18	24
12-14	0	8	8
	34	43	77

The age and sex distribution of the children surveyed in the baseline and evaluation surveys is shown in Tables 1 and 2 respectively. At the baseline survey, 74 children were surveyed among whom most were aged 6 to 11. Similar number of children with similar age and sex distribution was surveyed at the evaluation survey. The majority of the children surveyed at the evaluation also participated in the baseline survey.

5.1. QUESTIONNAIRE FINDINGS

The results of our questionnaire interviews are presented in bar charts in Figures 1 to 10. The bars show the percentage of children who chose a particular answer in each question. In the figures, the solid bars represent the finding at the baseline, and the shaded bars represent the finding at the evaluation survey after our dental health education programme.

Fig. 1 shows the children's frequency of toothbrushing. Nearly 90% of the children brushed their teeth twice daily at the baseline, and some brushed more than twice daily. After our dental health education, at the evaluation survey, no statistically significant changes ($p>0.05$) in toothbrushing frequencies was found. There was no children who never brushed their teeth.

The reasons for toothbrushing is shown in Fig. 2. At the baseline, most children said that they brushed their teeth to keep them clean and prevent tooth decay. There is an increase in the proportion of children who said so at the evaluation ($p<0.05$).

At the baseline, about half of the children said that their gums bled during toothbrushing (Fig. 3) and they did not know its causes (Fig. 4). About one-third of the children said that it was caused by trauma during brushing. About half of the children did not know how to prevent gum bleeding and 20% said they would brush their teeth with less force (Fig. 5). No improvements was found in these aspects at the evaluation.

When the question "Do you know what causes tooth decay?" was asked at the baseline, 43% and 45% of the children answered no brushing and sugar respectively (Fig. 6). At the evaluation, a higher proportion of the children, 63%, gave sugar as the answer ($p<0.05$) and a similar proportion answered no brushing.

However, when the question "Do you know that sugar causes decay?" was asked. 92% and 99% of the children answered yes at the baseline and evaluation respectively (Fig. 7).

At the baseline, on asking the children how to prevent tooth decay, 20% said did not know, 47% said more toothbrushing and only 24% said reduction in sugar intake (Fig. 8). Little change in their knowledge was found at the evaluation, except that more children answered toothbrushing as a preventive means.

Concerning the children's knowledge on fluoride, before our dental health education programme, only 30% of the children had heard of fluoride (Fig. 9). A statistically significant increase ($p<0.05$) to 58% was found at the evaluation. At the baseline, about 80% of the children did not know the effect of fluoride. Although most children did not know the effect of fluoride at both the baseline and evaluation survey (Fig. 10), there was a statistically significant ($p<0.05$) increase in the proportion of children who knew that fluoride prevented tooth decay, from 1% to 15%, after the dental health education programme.

At the baseline, more than half of the children took no sweet food the day before the survey and very few had more than two intakes (Fig. 11). A similar result was found at 2the evaluation.

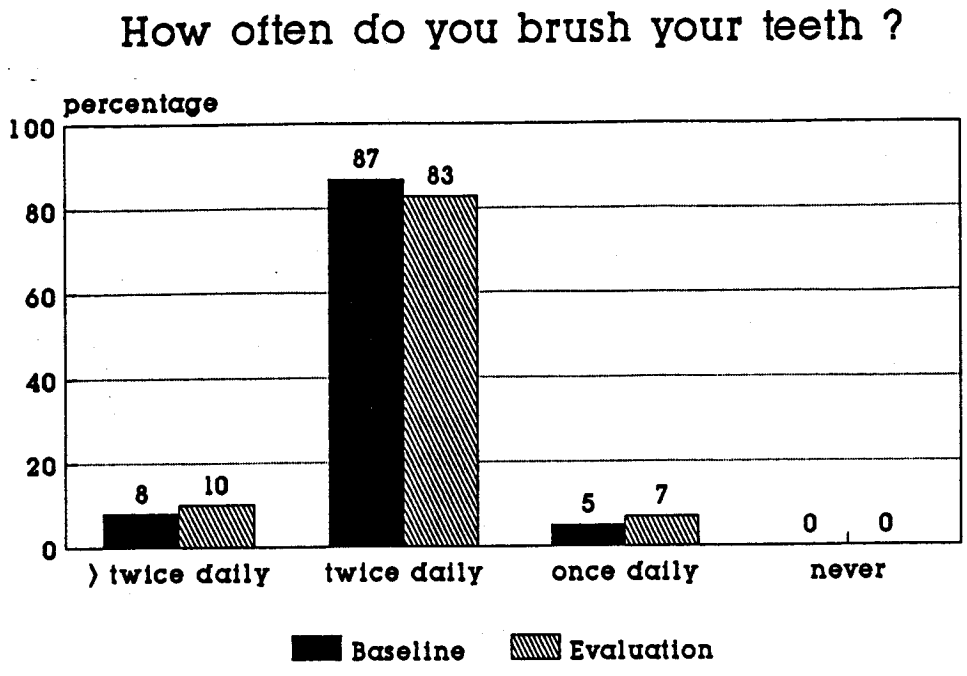

Fig. 1 Frequency of toothbrushing

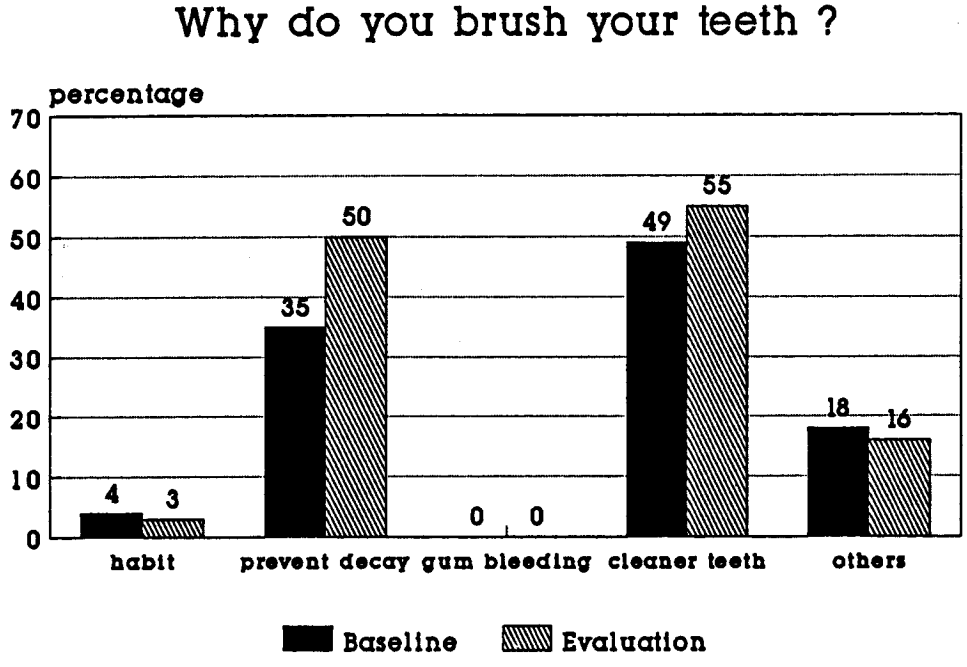

Fig. 2 Reasons for toothbrushing

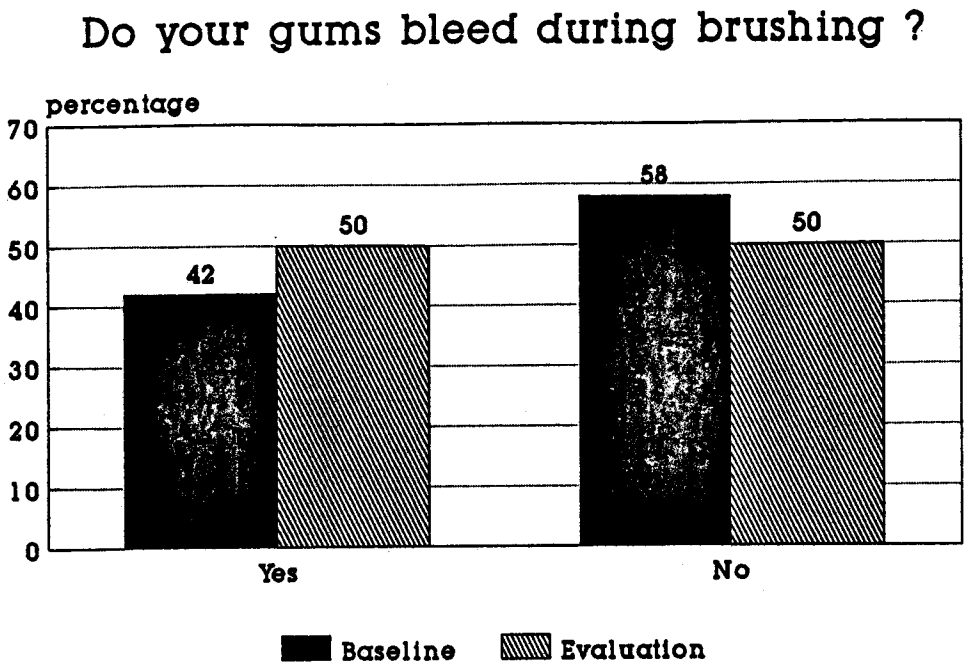

Fig. 3 Gum bleeding during brushing

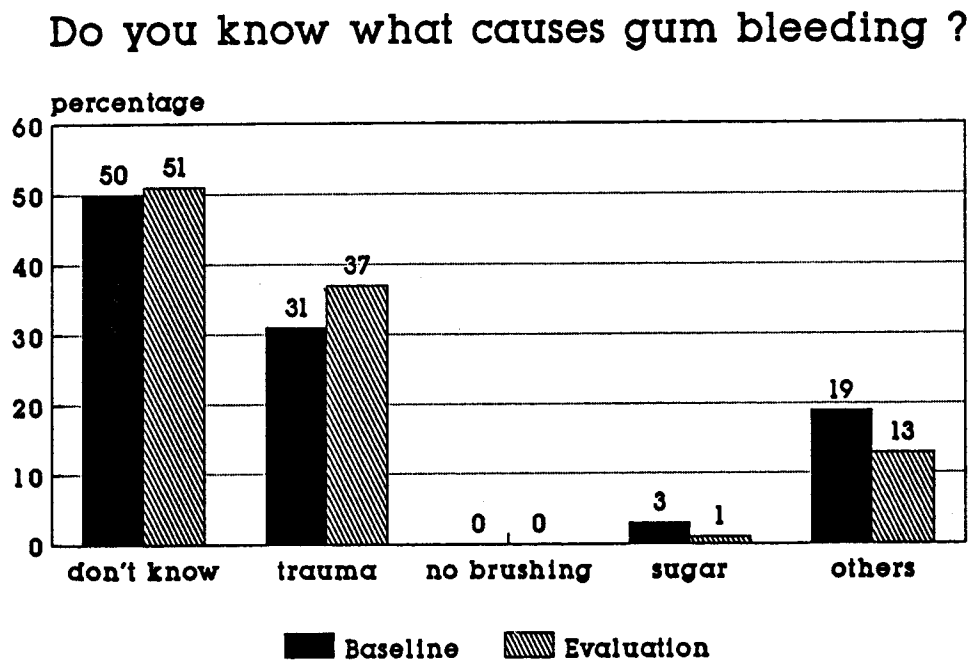

Fig. 4 Knowledge on the causes of gum bleeding

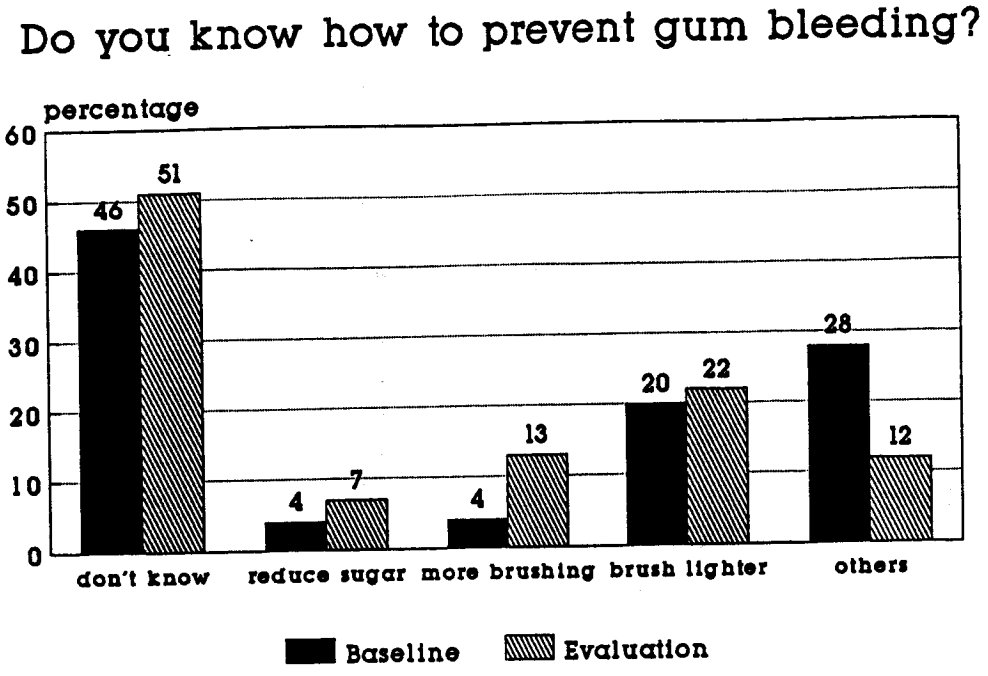

Fig. 5 Knowledge on how to prevent gum bleeding

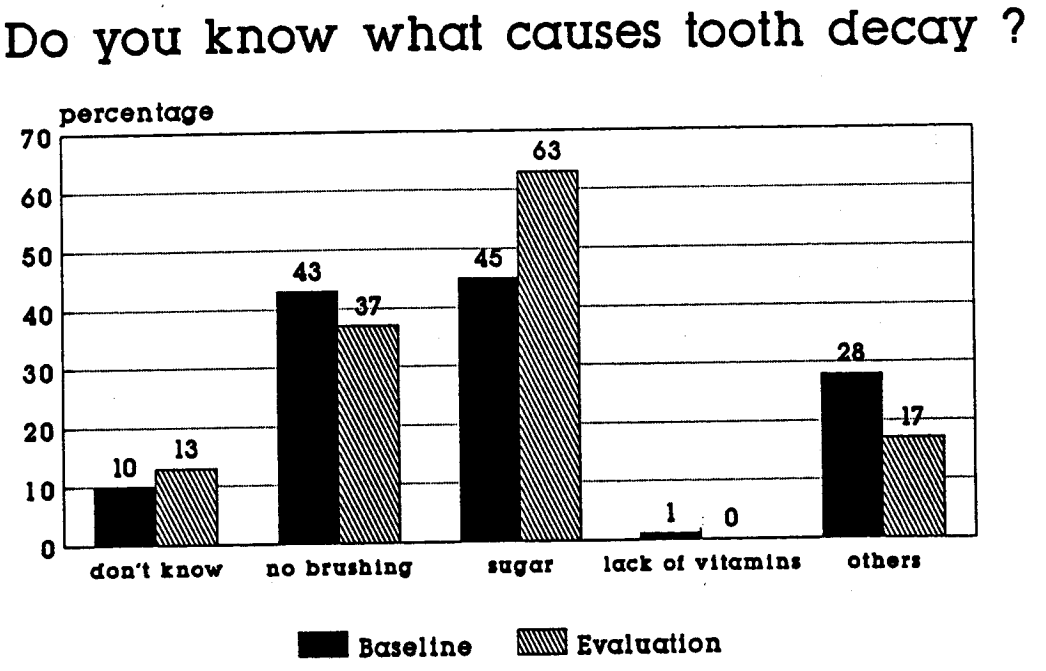

Fig. 6 Knowledge on the causes of tooth decay

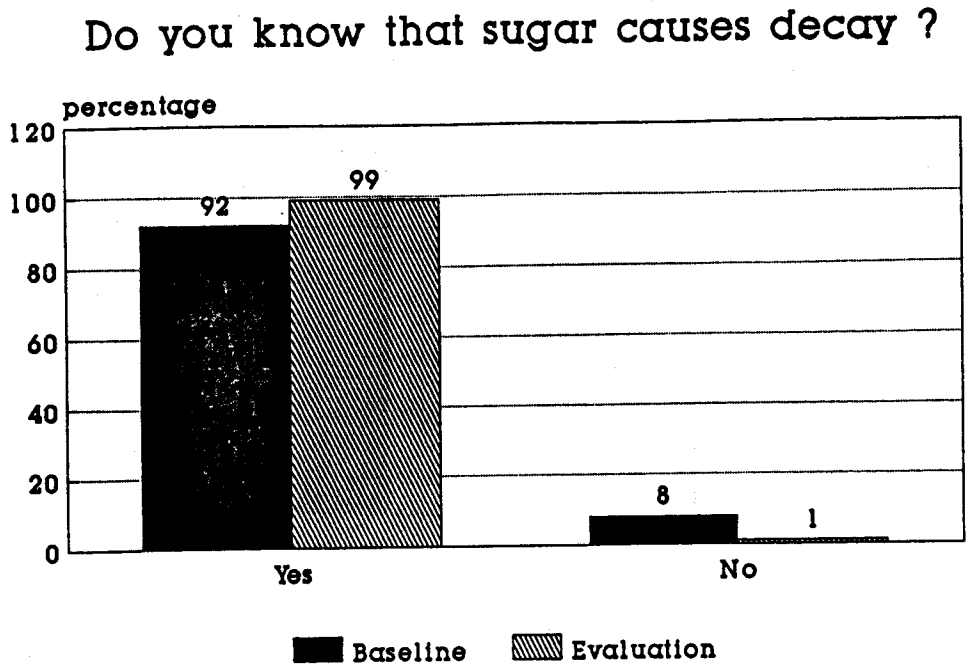

Fig. 7 Knowledge of sugar as a cause of tooth decay

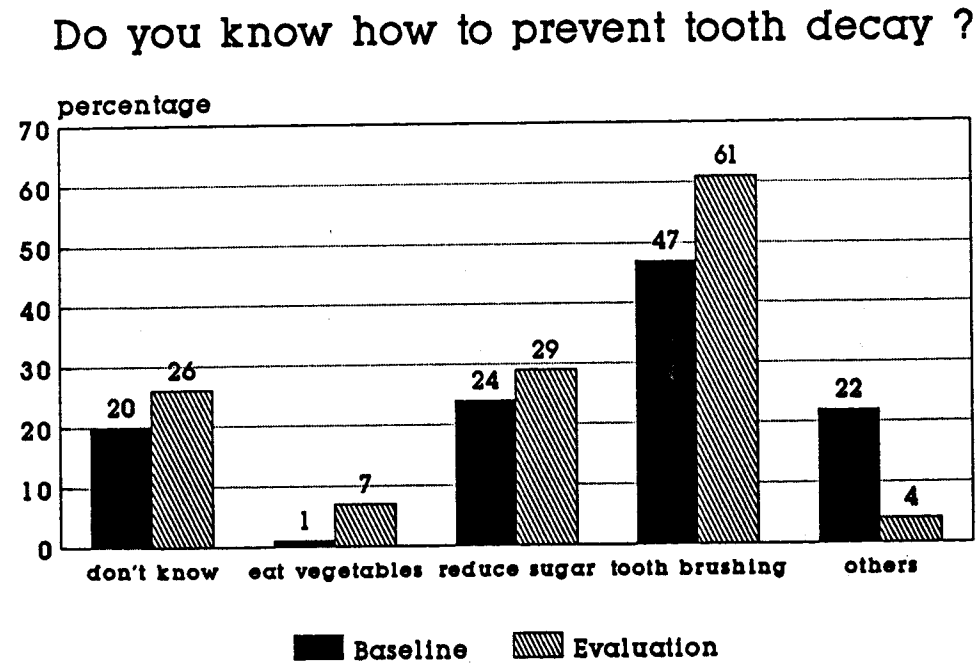

Fig. 8 Knowledge on how to prevent tooth decay

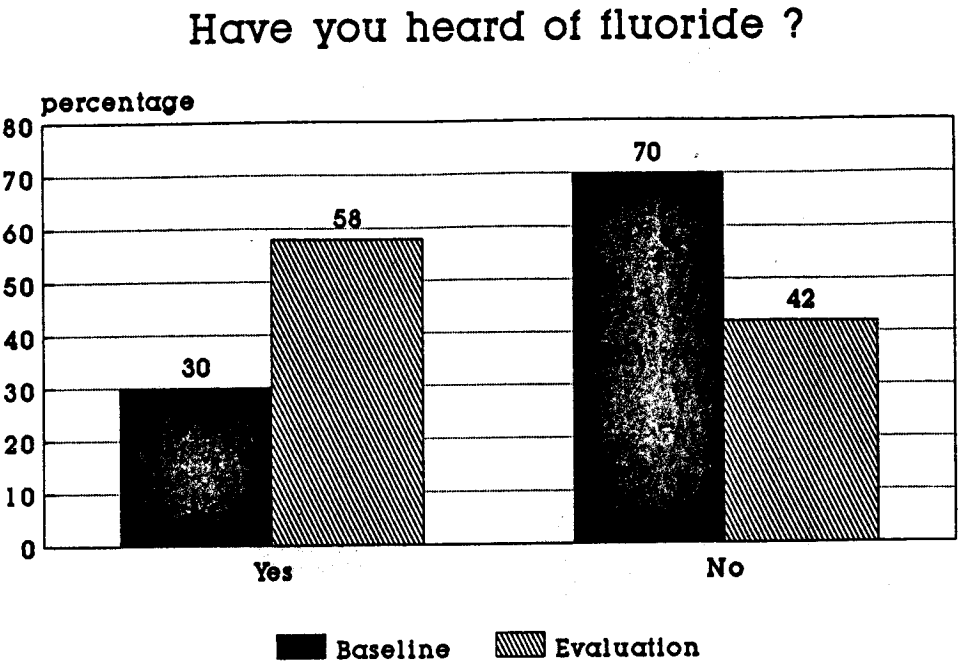

Fig. 9 Knowledge on fluoride

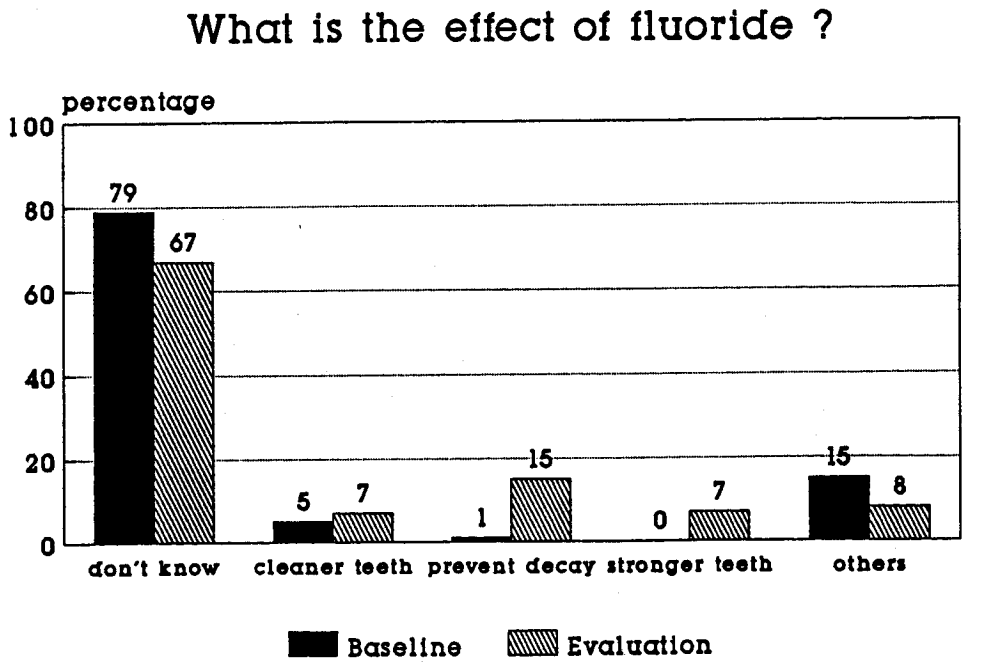

Fig. 10 Knowledge on the effect of fluoride

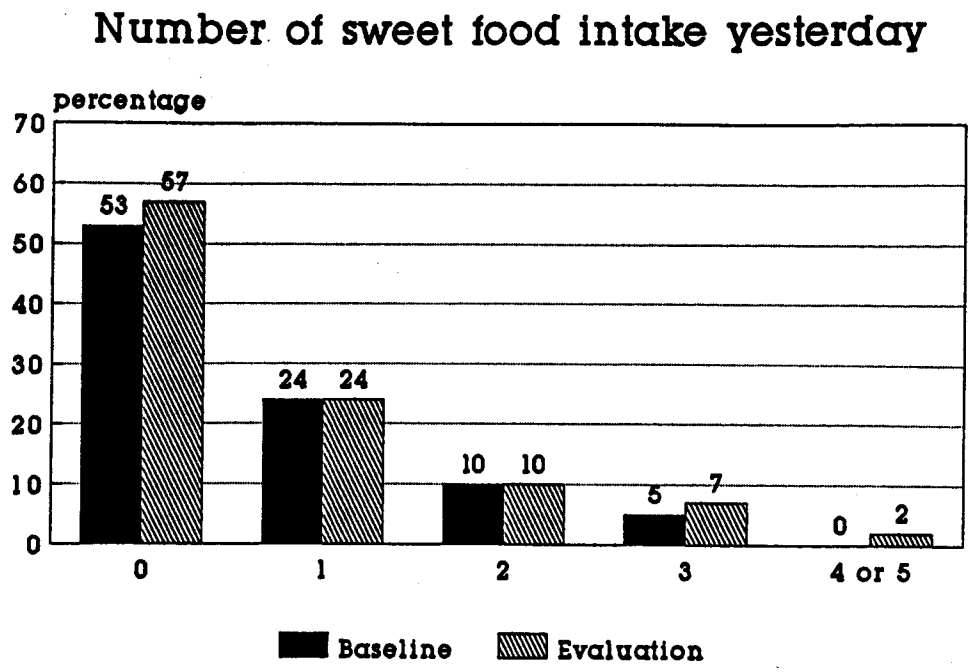

Fig. 11 Frequency of sweet food intake

5.2. CLINICAL FINDINGS

The dental caries experience of the primary and permanent dentition of the children are shown graphically in Figures 12 and 13.

The dmft index of the 6-8 year-olds is 2.8, which is composed of 1.3 decayed teeth, 0.3 missing teeth and 1.2 filled teeth (Fig. 12). The dmft index of the 9-11 year-olds is 2.7, and the proportion of the various components of the index is similar to the 6-8 year-olds.

The DMFT index of the 6-8 and 9-11 year-olds is 0.2 and 0.4 respectively in which half is decayed teeth and the other is filled teeth (Fig. 13). Only 8 children were aged 12-14 years, and their mean number of decayed and filled teeth is 0.4 and 3.0 respectively. In all children, no permanent teeth was found to be missing due to caries.

The oral hygiene status of the children in the two age-groups, 6-8 and 9-11 years, is shown in Figures 14 and 15. The bars shows the percentage of sites with plaque scores 0 to 3 at the baseline (solid bars) and at the evaluation (shaded bars).

In the 6-8 year-olds, there is a shift of the sites with score 3 to a smaller score between the baseline and evaluation examinations (Fig. 14). The drop in the proportion of sites scored 3 from 18% to 2% is statistically significant ($p < 0.05$).

A similar initial picture and change in the oral hygiene status of the 9-11 year-olds is also found (Fig.15). The decrease in the proportion of sites scored 3 from 14% to 3% is statistically significant ($p < 0.05$).

The gingival health status of the children is shown as the proportion of sites which did not bleed on probing during the surveys in Fig. 16. There is a decrease from 68% to 58% in the 6-8 year-olds, and an increase from 70% to 76% in the 9-11 year-olds, between the baseline and evaluation. However, both changes are not statistically significant ($p > 0.05$).

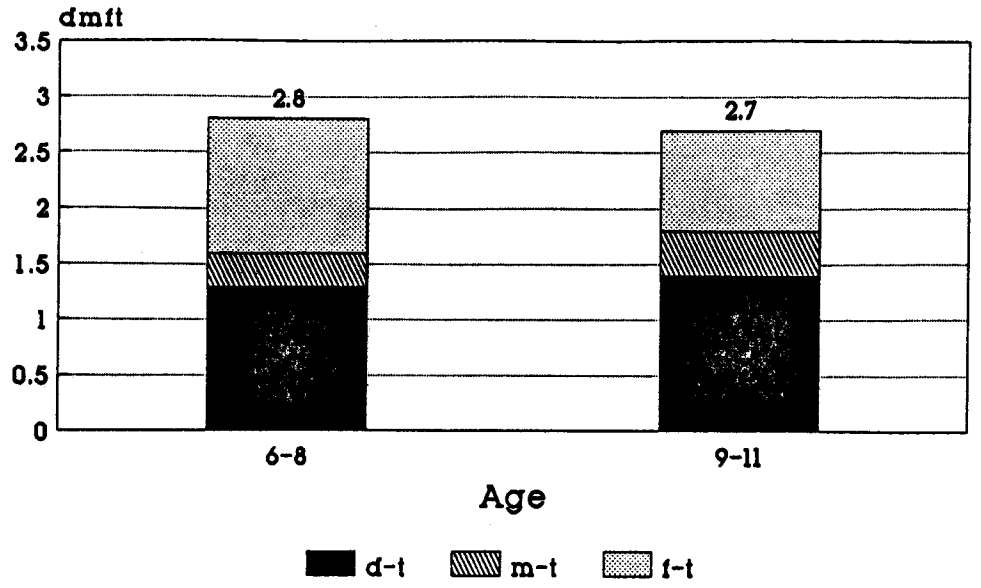

Fig. 12 Dental caries experience of the primary dentition of the children by age

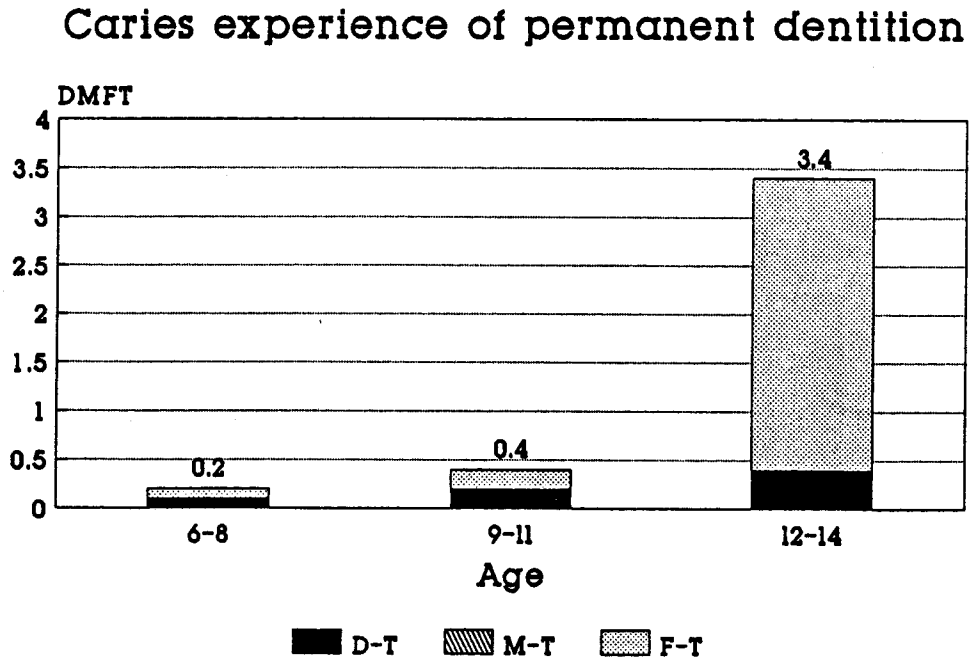

Fig. 13 Dental caries experience of the permanent dentition of the children by age

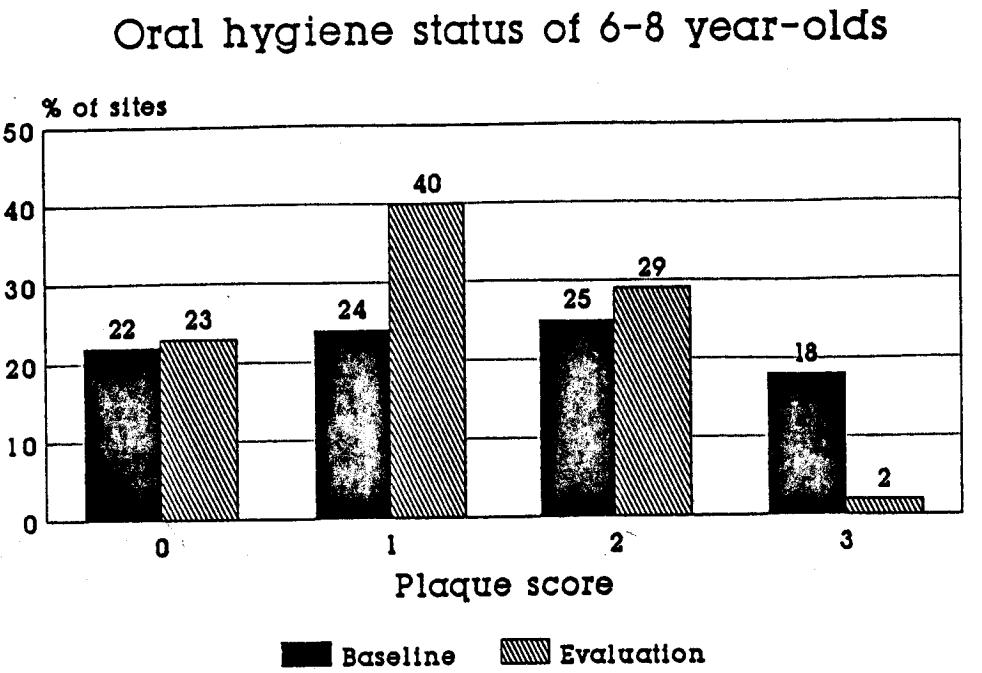

Fig. 14 Distribution of sites according to plaque score in the 6-8 year-olds

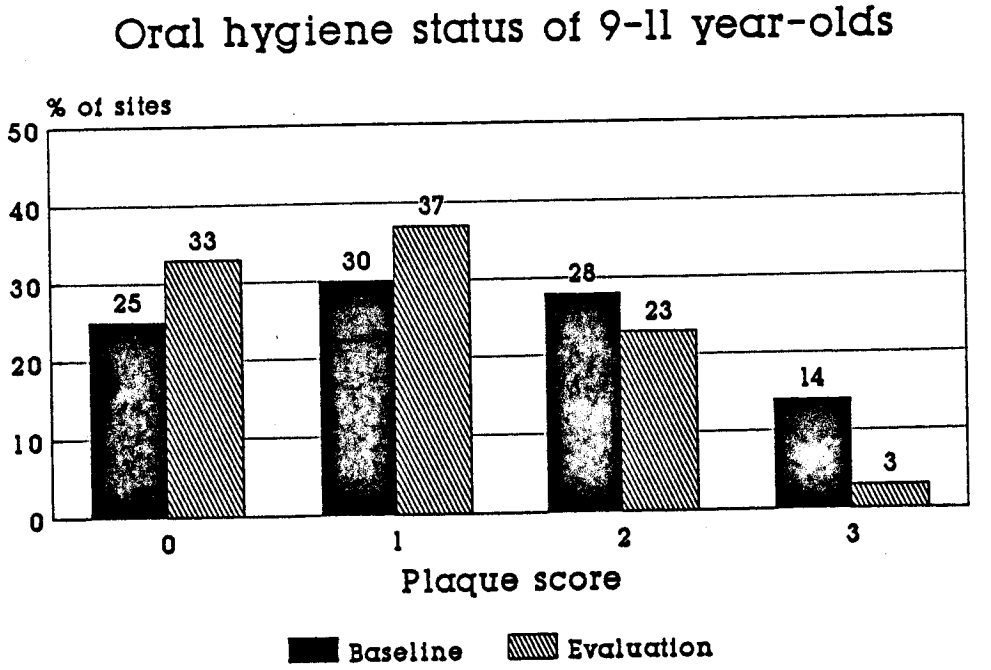

Fig. 15 Distribution of sites according to plaque score in the 9-11 year-olds

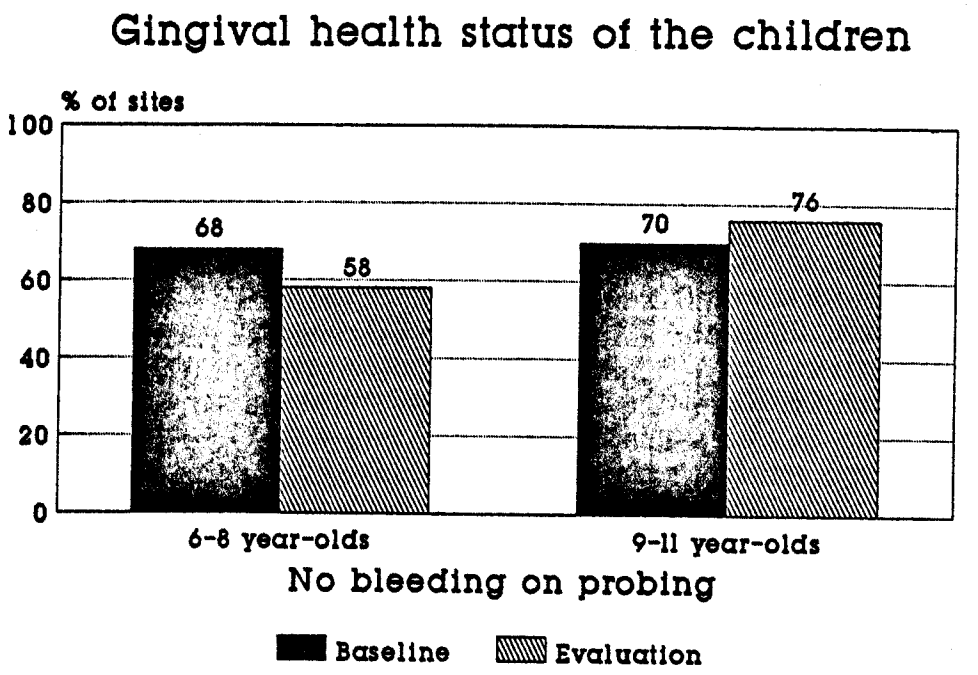

Fig. 16 Gingival health status of the children

6. DISCUSSION

The discussion is based upon the results obtained and a review of the programme in general. It will be divided into the following sections:

(1) Dental health knowledge
(2) Dental health behaviour
(3) Oral hygiene and oral health status
(4) Problems encountered

6.1. DENTAL HEALTH KNOWLEDGE

From the findings of the baseline survey, it can seen that the children had already possessed some basic knowledge about dental caries before the dental health education programme. On the other hand, their knowledge on periodontal disease is much less adequate, and they knew little about fluoride.

In comparing the baseline and evaluation data, there is little change in their dental health knowledge, with the exception of knowledge about fluoride. This is not too surprising because the children had already possessed some basic knowledge prior to the programme. Further gain in knowledge is difficult, particularly when the information on dental disease, diet and oral hygiene were given collectively in every visit. This may cause some confusion to the children. Such confusion can be avoided if only one simple piece of information was given at each visit and then added on one by one during subsequent visits. A clearer concept could then be attained. Besides, the results were affected by some rebellious children who intentionally gave wrong answers in the questionnaire interviews ; they found it to be funny.

Nevertheless, there is a statistically significant increase in their knowledge concerning fluoride. A postulated reason for such a change is that fluoride is quite a new and simple name to be remembered. The children might already have come across the message in TV commercials which was then reinforced by our programme.

6.2. DENTAL HEALTH BEHAVIOUR

There is no statistically significant change in the children's oral health behaviour as reflected by their reported frequency of toothbrushing and intake of sweet food after the dental health education programme.

Before the programme, 95% of the children said that they brushed their teeth twice or more daily and this seems to be very satisfactory. Therefore in the programme, emphasis was put on how to improve the brushing technique and not on the frequency of brushing.

Concerning further improvements in the dental health behaviour of the children, the area that needs greatest attention is their diet. Apart from receiving centrally provided meals from the institute, the children often receive sweet food from their house-parents as a reward for good performance especially at the end of the day. Although this may be a frequent practice among social workers in children's homes, this should be changed. As it may be very difficult to stop the house-parents from giving sweets to the children as rewards, messages on choosing other substitutes should be conveyed to house-parents.

6.3. ORAL HYGIENE AND ORAL HEALTH STATUS

The dental caries experience among the Po Leung Kuk children seems to be very low. The low level of untreated dental caries may be attributed to the easily accessible dental service provided by the volunteer dentists from the Hong Kong Dental Association.

From the oral examination, it was found that the children generally had a low plaque and gingival inflammation score.

After the programme, statistically significant improvement in oral hygiene can be found only on sites with an initial plaque score of 3, i.e. sites with abundant plaque. This may suggest that there is an improvement in the toothbrushing technique. Since our project did not employ an one to one teaching approach, the improvement in brushing technique may be small and thus only sites with the highest plaque score were able to show a change after our dental health education.

6.4. PROBLEMS ENCOUNTERED

Our target group is the primary school children living in Po Leung Kuk. We found that the wider the age range, the more difficult it is to design an appropriate programme suitable for all children. The age range of the participant children is wider than we have expected. However, since we worked in cooperation with the Po Leung Kuk, we had to involve all the children that were sent to us.

Since our target group is children, the idea of delivering dental health messages in form of games would appear very appealing. However, it does not seem to apply in this occasion. There was a misunderstanding by the children who regarded our programme as just a fun day. Thus they did not pay much attention in learning, digesting and remembering the messages conveyed through the games. The reason may be that there are many volunteer workers who provide games and fair day for the children during the weekends. So it is natural for the children to mistake our programme as just another one of these. Thus, careful planning and monitoring of the programme is essential, and delivering dental health messages through games to the Po Leung Kuk children may not be appropriate.

Our project as a whole was carried out smoothly despite that there were a few disobedient children who intentionally gave wrong answers to our questions during the programme as they found it to be funny. Moreover, there were some emotionally unstable children who interrupted the programme slightly. These children affected the attentiveness of the other children because when one of them cried, the other children became restless. In order to keep the children under control, most of the dental health education programmes was carried out in small groups. Smaller groups with extra labour would be even more ideal. Fortunately the house-parents with their authorities helped us a lot in keeping the order.

Participation of house-parents in the dental health education was essential, and they should play an important role in the programme by giving regular reinforcements to the children. It is a pity that only a receptive approach was allowed in educating the house-parents in conducting our project. We would like to have special arrangements to educate the house-parents but this was not possible because they worked in shifts. Nevertheless, we had tried to involve the house-parents by asking them to accompany

the children throughout the programme, and tried to educate them at the same time. However, there was a general lack of interest from the house-parents, and they only paid attention to the discipline of the children and not to our dental health messages.

7. CONCLUSIONS

From the results and discussion, the following conclusions are drawn:

(1) The children possessed basic ideas on dental caries but inadequate knowledge on periodontal disease.

(2) There is little change in dental health knowledge except on fluoride after our dental health education programme.

(3) There is a statistically significant improvement in oral hygiene at the sites with an initial plaque score of 3.

(4) Dental caries experience among the children in Po Leung Kuk was low.

(5) The house-parents were very important in the success of the dental health education programme. However, there was a general lack of participation of the house-parents in our project which made the reinforcement on the dental health education difficult.

(6) The idea of delivering dental health messages to children in form of games is worth attempting but it is not appropriate in Po Leung Kuk.

8. RECOMMENDATIONS

After drawing the above conclusions, we would like to make the following recommendations:

(1) In implementing dental health education, in order to bring about behaviourial changes, we must emphasize on motivation and that constant reinforcement is essential.

(2) The house-parents in Po Leung Kuk must get involved and should play an active role in the dental health programme, special effort is needed to motivate their interest.

(3) A preventive treatment approach should be adopted by the dentists who provide dental care services to the children in Po Leung Kuk.

(4) In planning dental health education, care must be taken to ensure that a simple and clear message is delivered at each visit to avoid confusion.

9. ACKNOWLEDGEMENT

Our project has received generous support and encouragement from many people to whom we wish to express our gratitude.

We are indebted to Dr. E. Lo, our supervisor, for his help in every aspect of the project.

We would like to thank the Hong Kong Dental Association, Johnson and Johnson (HK) Ltd., and Miss Amy Tong for lending us the dental health education materials that were used in our project. We would also like to thank Professor S.H.Y. Wei for giving us valuable advices in planning our dental health education programme.

A special acknowledgement is due to the DSAs and hygienists who had accompanied and assisted us throughout the project.

We are particularly grateful to Miss Lee Wing Kum and the house-parents of Po Leung Kuk who had given us so much advice, co-operation and encouragement by their active participation.

We would also like to extend our sincere thanks to the Colgate Palmolive (H.K.) Ltd. for donating toothbrush and toothpaste samples to us for use as souvenirs to the children.

We would also wish to thank Ms. Jenny Lee and Ms. Josephine Yuen for their secretarial support.

It is not possible to list every one who provided ready assistance and useful information but we are indebted to all of them.

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一九九九年保良局口腔衛生常識問卷(4A組)

姓名：_____ 第一/二次问卷

性別：_____

年齡：_____

請在合適格子上加✓號

1. 你幾耐刷一次牙？

___ 1. 一日兩次以上
___ 2. 一日兩次
___ 3. 一日一次
___ 4. 幾日一次
___ 5. 沒有

2. 你有沒有用牙膏刷牙？

___ 1. 有
___ 2. 沒有

3. 你刷牙的原因是什麼？（可多过一項）

___ 1. 習慣
___ 2. 人刷自己又刷
___ 3. 防止蛀牙
___ 4. 防止流牙血
___ 5. 保持牙齒清潔
___ 6. 其他（请註明）_____

4. 是誰人教你刷牙？（可多过一項）

___ 1. 沒有
___ 2. 家人
___ 3. 姑娘
___ 4. 小朋友
___ 5. 牙医
___ 6. 其他（请註明）_____
___

5. 你有沒有聽過氟素 / FLUORIDE?

___ 1. 有
___ 2. 沒有

6. 你知唔知氟素有什麼用途? (可多于一項)

___ 1. 唔知道
___ 2. 令牙齒潔白
___ 3. 防止蛀牙
___ 4. 消除口氣
___ 5. 使牙齒更堅硬
___ 6. 其他 (請註明) _____

7. 你刷牙時有沒有流牙血?

___ 1. 有
___ 2. 沒有

8. 你知唔知道流牙血的原因? (可多于一項)

___ 1. 唔知道
___ 2. 刷牙刷傷牙肉
___ 3. 熱氣
___ 4. 唔刷牙
___ 5. 食甜的食物
___ 6. 其他 (請註明) _____

9. 你知唔知道怎樣防止流牙血? (可多于一項)

___ 1. 唔知道
___ 2. 少吃糖
___ 3. 多刷牙
___ 4. 避免吃熱氣的食物
___ 5. 刷牙刷細力一点
___ 6. 其他 (請註明) _____

10. 你知唔知道為什麼有蛀牙 (可多于一項)

___ 1. 唔知道
___ 2. 不刷牙
___ 3. 多吃糖
___ 4. 缺乏维他命
___ 5 遺傳
___ 6. 其他 (請註明) _____

11. 你知唔知道点样防止蛀牙？（可多于一项）
__ 1. 唔知道
__ 2. 多吃生菜
__ 3. 少吃糖
__ 4. 多刷牙
__ 5. 饮凉茶
__ 6 其他（请注明）_____

12. 昨日三岁以时，你有没有食甜嘅宵食呢？
__ 1. 有 （请答第13、14题）
__ 2. 没有 （请答第15题）

13. 你食过几多次？
_____

14. 你食的甜宵食是什么？（可多于一项）
__ 1. 糖
__ 2. 朱古力
__ 3. 甜生果干
__ 4. 蛋糕
__ 5. 甜饼干
__ 6. 其他（请注明）_____

15. 你知唔知道食甜嘢会烂牙？
__ 1. 知
__ 2 唔知道

— 完 —

COMMUNITY HEALTH PROJECT 1989
GROUP 4.1
SURVEY OF CHILDREN IN PO LEUNG KUK

PLAQUE INDEX

	16	12	24
buccal			
lingual			
	44	32	36

Codes : 0 = none
1 = recognise on probe only
2 = moderate, visible
3 = abundant altering tooth contour

BLEEDING ON PROBING

	16	12	24
buccal			
lingual			
	44	32	36

Codes : 0 = no bleeding
1 = bleeding

DENTAL CARIES STATUS OF TEETH

		55	54	53	52	51	61	62	63	64	65		
17	16	15	14	13	12	11	21	22	23	24	25	26	27
47	46	45	44	43	42	41	31	32	33	34	35	36	37
		85	84	83	82	81	71	72	73	74	75		

Codes : Primary Permanent

A	1	= sound
B	2	= decayed
C	3	= missing due to caries
D	4	= filled
E	5	= missing due to other reasons

FOOD SAMPLES USED IN DIETARY ADVICE

Less Cariogenic Food Samples

1. Drinks -- Milk (Dutchlady fresh milk)
   Distilled water
2. Sandwiches -- Sliced bread with butter, ham and corned beef.
3. Biscuits -- Crackers with sesame seeds.
4. Sausages
5. Crisp -- Vegetable rings
6. Nuts -- Peanuts

CARIOGENIC FOOD SAMPLES

1. Drinks -- Coke
   Orange juice
   Lemon tea
   Chocolate milk
2. Snacks -- Jelly candies
   Chewing gum
   Coconut and peanut sticky candy
   Marshmallow
   Calbury bar
   Smarties
3. Cakes -- Garden chiffon cakes
4. Biscuits -- Wafers
   Lemon crisp
   Cookies
5. Fruits -- Preserved canned cocktail fruits
   Raisins
   Jam

Questions used in the quiz

(1) 以下是非題：牙出引起蛀牙
(2) 食水裏含有甚麼可以防止蛀牙
(3) 試舉出二樣含有氟素 / Floride 的東西
(4) 朱古力，糖果，梳打餅：那一樣會引致蛀牙
(5) 試舉牙周病三樣病徵
(6) 試舉三樣食物對牙齒有害
(7) 試舉三樣食物對牙齒無害
(8) 怎樣導致有牙周病
(9) 垢膜為甚麼會引致我們有牙病
(10) 蛀牙的成因
(11) 每個人正常換多少次牙 a, 0, b, 1, c, 2, d, >2
(12) 以下那個不是牙齒的名稱 a, 大白齒 b, 林柿 c, 犬齒.
(13) 每個人應該多少時候檢查牙齒一次 a, 一世一次 c, 不用 b, 半年一次
(14) 牙痛應該怎樣做？ a, 飲涼茶 b, 看牙醫 c, 飲糖水
(15) 初期蛀牙是否一定有病徵
(16) 通常第一隻恒齒幾多歲出 a, 2 b, 6 c, 9
(17) 刷牙方法是 a, 向上向下刷 b, 45° 刷牙齒和牙肉交接處 c, 沒有特別方法
(18) 那一樣不是正確的口腔清潔用具 a, 豬毛牙刷 c, 氟素牙膏. b, 牙線
(19) 牙線是主要用來清理 a, 牙縫 c, 舌頭 b, 牙面
(20) 怎樣預防蛀牙
(21) 怎樣預防牙周病
(22) 氟素有甚麼用途
(23) 牙垢，牙漬，蛀牙，牙石：以上那一種說牙不會清除的.
(24) 恒齒一般正常有多少隻
(25) 牙刷刷頭最大不能超過多少
(26) 除了刷牙，還有什麼可以清潔牙齒的方法？試舉一項
(27) 乳齒正常一般有多少隻
(28) 一般人在幾多歲會換完所有乳齒 a, 8-9 c, 17-18 b, 12-13
(29) 食甜的食物最能在甚麼時候吃而又減少導致蛀牙的机會 a, 睡覺前 c, 食早午晚餐的時候 b, 刷完牙後

(30) 怎樣可以最佳試驗自己刷牙刷得乾淨
a, 照鏡　c, 用牙簽.
b, 驗牙片

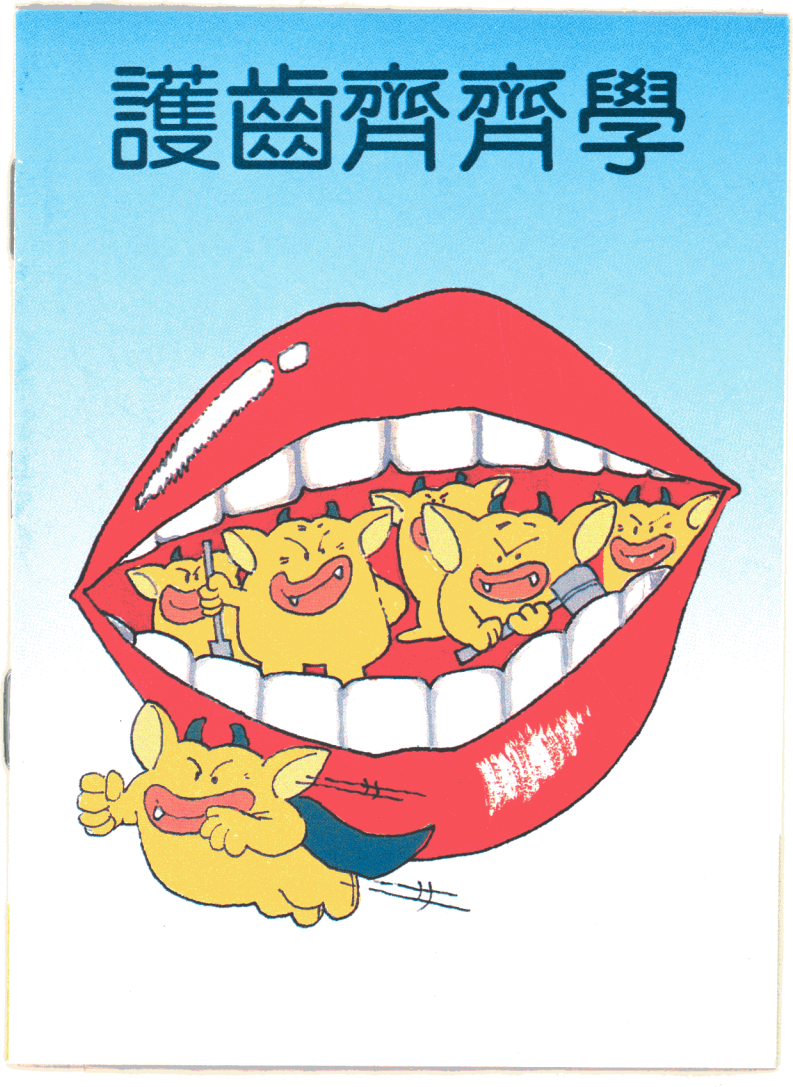
(31) 斑膜，牙石，氟素，糖：那一樣對牙齒有害

(32) 牙齒構造有多少層

(33) 那一樣不會有牙癌：a, 蛀牙　b, 牙週牙　c, 換牙

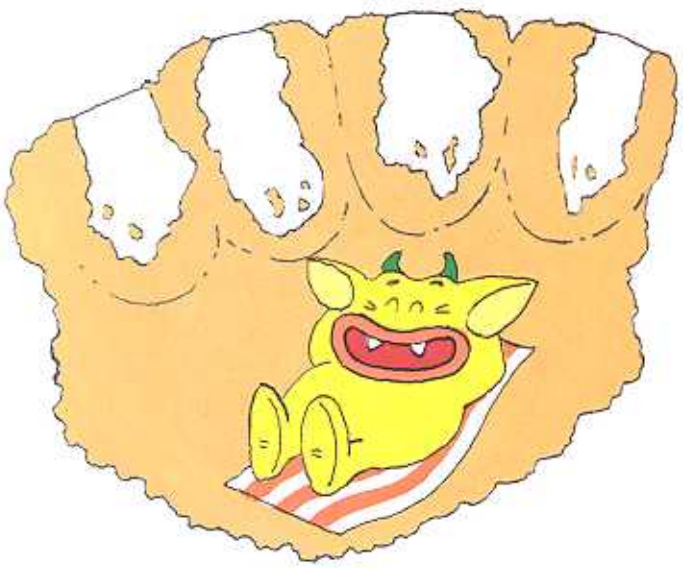
(34) 每個人是不是需要擁有自己的牙刷

DENTAL HEALTH EDUCATION PAMPHLET
GIVEN TO THE CHILDREN



DENTAL HEALTH EDUCATION PAMPHLET
GIVEN TO THE CHILDREN

什麼是垢膜



垢膜是一層不斷滋生於牙齒表面而帶黏性的細菌薄膜。由口水、細菌、食物殘渣混合而成。若不清除垢膜，鈣化後便會形成牙石，而引致各種牙患。

常見牙患—蛀牙

口腔內之細菌利用糖份(如糖果、甜品等)繁殖，產生酸性物質，侵蝕牙齒，形成蛀牙。

酸性物質首先會破壞牙齒外層之琺瑯質，繼而侵蝕全牙本質。若不及早治療便會破壞牙髓，引致發炎，形成牙癌，病者會感劇痛。

DENTAL HEALTH EDUCATION PAMPHLET
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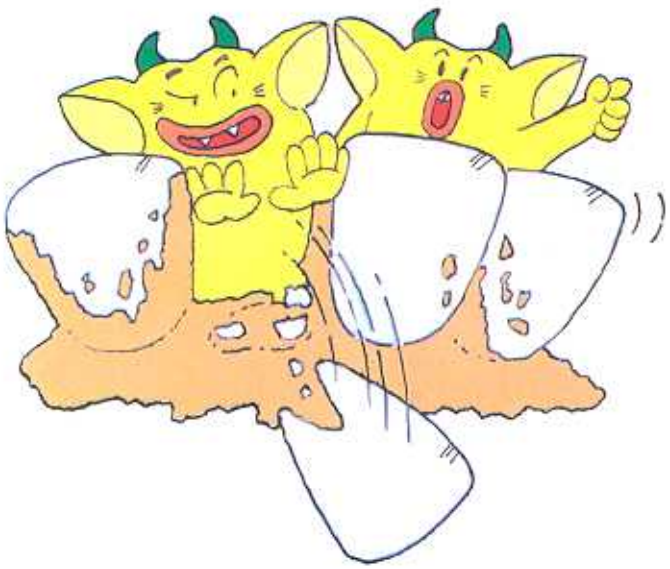
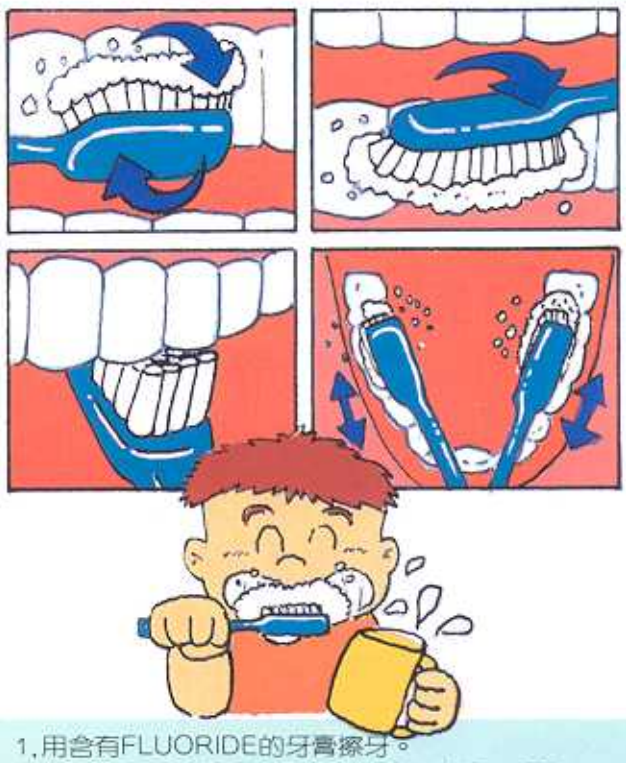
常見牙患—牙周病



牙周病是常見牙患之一，由垢膜引致。初期擦牙時會流血、口臭、牙肉紅腫發炎，最後牙肉及牙床骨萎縮，牙齒鬆動脫落。

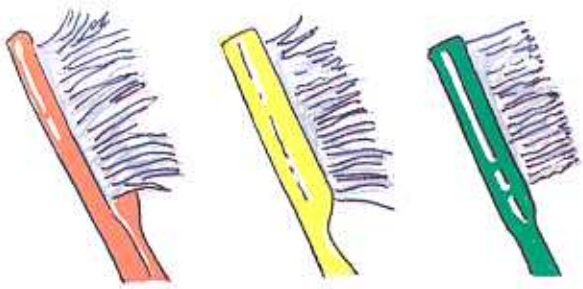
護齒之道一：擦牙方法



1.用含有FLUORIDE的牙膏擦牙。
2.將牙刷刷毛貼近牙齒同牙肉邊成45度角，牙刷前後打圈，擦完上排，再擦下排，用同樣方法擦牙齒背面。
3.清潔門牙的齒背，直放牙刷用刷毛前端上下擦動。
4.最後清擦牙齒之咬合面。

DENTAL HEALTH EDUCATION PAMPHLET
GIVEN TO THE CHILDREN

護齒之道二：牙刷選擇

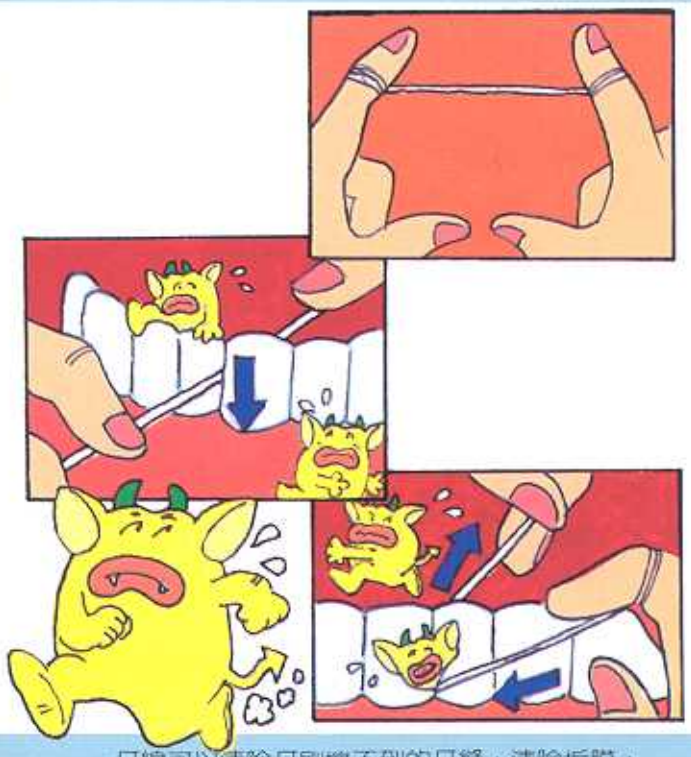


應更換的牙刷

兒童牙刷　　幼兒牙刷

1. 要選擇圓角、大小和刷毛軟硬適中的牙刷，以免擦損牙肉。
2. 兒童應選用兒童或幼兒牙刷。
3. 用多層刷毛的牙刷能更有效清除齒垢。
4. 舊牙刷如有刷毛橫聳或彎曲，應立刻換新牙刷。
5. 爲保持牙刷的清潔效能，平均每三個月應更換牙刷。

護齒之道三：牙線用法



牙線可以清除牙刷擦不到的牙縫，清除垢膜，使用方法：

1. 截取長約45厘米的牙線，線頭繞住雙手的食指。
2. 用姆指支持牙線，將牙線輕移壓入牙縫處。
3. 牙線貼住牙面上下移動，就可以清除牙縫之間的牙垢、垢膜。

DENTAL HEALTH EDUCATION PAMPHLET
GIVEN TO THE CHILDREN

護齒之道四：用FLUORIDE漱口水

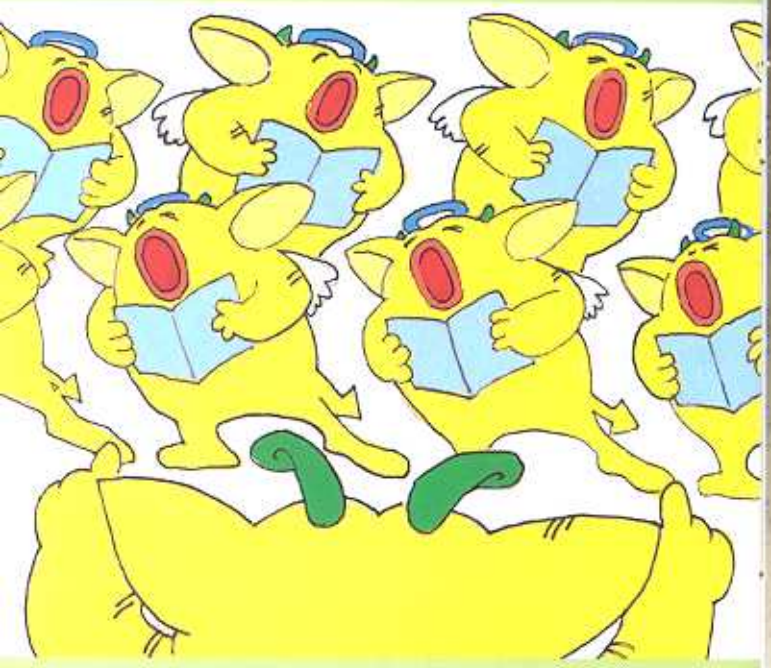
液體FLUORIDE漱口水能更有效地滲透及接觸牙齒的每一部份，尤其牙刷擦不到的地方，所以對防止蛀牙，較單獨使用含有FLUORIDE的牙膏效力更高40%。患有嚴重牙病或者蛀牙得到醫生正確指示，都應適用液體FLUORIDE漱口。

護齒之道五：定期接受牙醫檢查

保護牙齒健康，除了要經常注意口腔清潔之外，並應定期接受牙科醫生檢查，以確保牙齒得到適當的護理。

DENTAL HEALTH EDUCATION PAMPHLET
GIVEN TO THE CHILDREN

護齒口訣



每日早晚要擦牙
清潔牙縫用牙線
注意口腔嘅衛生
千祈咪食咁多糖
定期搵牙醫檢查